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WHAT IS CLAIMED IS:

1. An optical data link comprising:
 - a housing;
 - 5 a circuit board provided in the housing;
 - a semiconductor electrical device provided on the circuit board;
 - an electrically insulative member covering the semiconductor device;
 - 10 an optical subassembly supported by the housing, the optical subassembly including a semiconductor optical device connected to the semiconductor electrical device through the circuit board;
 - a first heat spreader provided between the housing and the semiconductor electrical device, the first heat spreader being in contact with the housing; and
 - 15 a second heat spreader provided between the housing and the optical subassembly, the second heat spreader being in contact with the housing and the optical subassembly,
 - 20 wherein the second heat spreader is located apart from the first heat spreader.
2. The optical data link according to claim 1,
 - wherein the housing includes a base and a cover, the base supports the circuit board, and the circuit board is
 - 25 provided between the base and the cover,
 - wherein the semiconductor electrical device is

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provided between the circuit board and the cover,

wherein the first heat spreader is provided between the circuit board and the cover so as to be in contact with the cover and the insulative member, and

5 wherein the second heat spreader is provided between the optical subassembly and the cover so as to be in contact with the cover.

3. The optical data link according to claim 1, wherein the housing includes a base and a cover, the
10 base supports the circuit board, and the circuit board is provided between the base and the cover,

wherein the semiconductor device is provided between the circuit board and the base,

wherein the circuit board has a thermal via provided
15 in a predetermined region thereof and the semiconductor device is mounted on the predetermined region, and

wherein the first heat spreader is provided between the circuit board and the cover so as to be in contact with the cover and the thermal via.

20 4. The optical data link according to claim 1, wherein the housing includes a base and a cover, the base supports the circuit board, and the circuit board is provided between the cover and the base,

wherein the semiconductor electrical device is
25 provided between the circuit board and the cover,

wherein the first heat spreader is provided between

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the circuit board and the cover so as to be in contact with the cover and the insulative member, and

wherein the second heat spreader is provided between the optical subassembly and the base so as to be in contact with the base.

5 5. The optical data link according to claim 1, wherein the housing includes a base and a cover, the base supports the circuit board, and the circuit board is provided between the base and the cover,

10 wherein the semiconductor electrical device is provided between the circuit board and the base,

wherein the first heat spreader is provided between the circuit board and the base so as to be in contact with the base and the insulative member, and

15 wherein the second heat spreader is provided between the optical subassembly and the cover so as to contact with the cover.

20 6. The optical data link according to claim 1, wherein the housing includes a base and a cover, the base supports the circuit board, and the circuit board is provided between the base and the cover,

wherein the semiconductor electrical device is provided between the circuit board and the base,

25 wherein the first heat spreader is provided between the circuit board and the base so as to be in contact with the base and the insulative member, and

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wherein the second heat spreader is provided between the optical subassembly and the base so as to be in contact with the base.

7. The optical data link according to claim 1,
5 wherein the first heat spreader is in contact with a first region of the cover,

wherein the second heat spreader is in contact with a second region of the cover, and

wherein the cover has an opening provided between the
10 first and second regions.

8. The optical data link according to claim 2,
wherein the base and the cover form a cavity and the circuit board is provided in the cavity, and

wherein the cover has first and second fingers, the
15 first finger is bent into the cavity so as to be in contact with the first heat spreader, and the second finger is bent into the cavity so as to be in contact with the second heat spreader.

9. The optical data link according to claim 8,
20 wherein the cover has a side wall and a lid, and wherein the first and second fingers are provided in at least one of the side wall and the lid.

10. The optical data link according to claim 8,
wherein the cover has an opening provided between the
25 first and second fingers.

11. The optical data link according to claim 2,

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wherein the base supports a plurality of lead terminals,
and

wherein the circuit board makes an angle from 10 degrees
to 80 degrees with respect to the base.

5 12. The optical data link according to claim 8,
further comprising:

another optical subassembly provided in the housing;
another circuit board provided in the housing; and
an electronic component mounted on the other circuit

10 board, the electronic component being electrically
connected to the other optical subassembly, and

wherein the cover has a third finger bent into the
cavity for transferring heat from the second circuit board,
and

15 wherein the cover has an opening provided between the
first and third fingers.

13. The optical data link according to claim 1,
wherein the circuit board includes a conductive
pattern provided on a primary surface thereof,

20 wherein the conductive pattern is connected to the
semiconductor device, and

wherein the first heat spreader is in contact with
the conductive pattern.

14. The optical data link according to claim 1,
25 further comprising:

a connection board connected with the optical

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subassembly; and

a flexible printed board connecting the circuit board with the connection board,

wherein the optical subassembly has a lead terminal
5 connected to the connection board.

15. The optical data link according to claim 1,
wherein the first and second heat spreaders are electrically insulative.

16. The optical data link according to claim 1,
10 wherein at least one of the first and second heat spreaders have elasticity sufficient to deform in accordance with the shapes of the cover, the semiconductor electrical device and optical subassembly.

17. The optical data link according to claim 1,
15 wherein at least one of the first and second heat spreaders includes a silicone gel.

18. The optical data link according to claim 1,
wherein the semiconductor optical device contains a semiconductor light-emitting device driven by the
20 semiconductor electrical device.

19. The optical data link according to claim 1,
wherein the first and second heat spreaders are made of material having a thermal conductivity of 0.5 to 50 W/m/K.

20. The optical data link according to claim 1,
25 wherein the first and second heat transfer are made of material having hardness of 10 to 100 under the ASKER-C

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defined in the Society of Rubber Institute Standard (SRIS)

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